



Japan-U.S. Decommissioning and Remediation Fukushima Recovery Forum

Tokyo, Japan



A Berkshire Hathaway Company

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1918 - 2013

Celebrating

RSCC

95 Years

Of Continuous Innovation

Who is RSCC Nuclear Cable?

- *We are the world's leading supplier of safety-class cables for nuclear facilities, including the largest U.S. DOE facilities, every reactors in North America, and every new Generation III reactor being constructed today.*
- **RSCC** is a Marmon Cable business unit specializing in **Nuclear**, Oil & Gas, Mining and Transportation for harsh conditions
 - 300 employees, USD \$200 million
 - **Nuclear** continuously since 1967 (longer than any other)
- **Marmon Cable** companies consists of 13 specialty companies
 - 2,300 employees, USD \$800 million
- **The Marmon Group** consists 150+ manufacturing companies **18,000 employees, USD \$8 billion**
- **Berkshire Hathaway Inc.** is the world's 8th largest company
 - Owned and managed by Mr. Warren Buffet, CEO
 - 300,000 employees, USD \$288 billion
 - BNSF, GEICO, Mid American, The Marmon Group, etc.

What has RSCC Nuclear Cable done?

Tank Waste Treatment Plant (WTP) Hanford, Washington, USA



Currently Supplying

- *NQA-1 Low & Medium Voltage*
- *Power, Instrumentation & Control (I&C), Data*

Mixed Oxide (MOX) Plant South Carolina, USA



September 2012 - completed

- *3,000 Reels, 6 Million Feet*
- *NQA-1 Low & Medium Voltage*
- *Power, I&C, Coax, Fibre*

The World's First Gen III Reactors

***Westinghouse AP-1000
Sanmen & Haiyang, China***

***KEPCO APR-1400
Busan, Korea & Barakah, UAE***



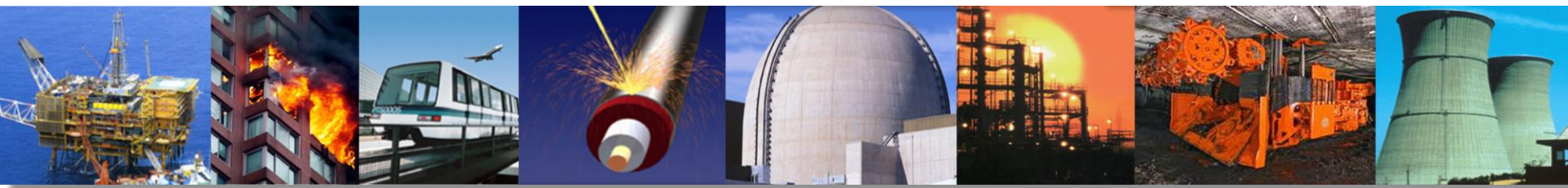
July 2013 - Completed

- Specialty Cables***
- Fukushima Upgrades***



Currently Supplying

- World's First 60-Year Class "1E"***
- Low & Medium Voltage***
- "Replacement Cables" for SK 3&4***



RSCC 60-Year Products for AP-1000 and APR-1400

- **Class 1E Squib Valve Cable**
- **Cat 3 Cable**
- **Cat 6 Shielded Cable**
- **Class 1E Coax Cable**
- **Communications System & Special Instrument Cable**
- **Fire Alarm Cable**
- **Pressurizer Heater Cable**
- **Igniter Cable**
- **Thin Wall Panel Wiring**
- **Reactor Head Cables**
- **Class 1E Instrumentation, Control, and Power Cable**



FIREWALL III



**600 Volt, 90°C – 60 Year Life
Class 1E, LOCA Qualified
Key Item Inventory**

**Power Cables
Control Cables
Instrumentation Cables
Thermocouple Cables**





Kerite[®]

Medium
Voltage

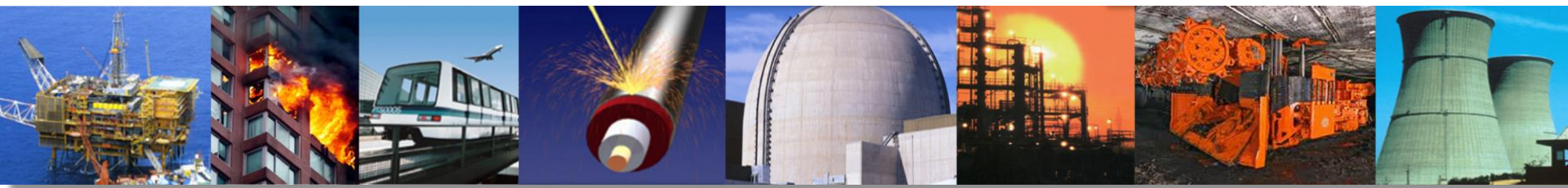
40+ Year Experience With Zero Failures

Excellent Wet/Submerged Performance

60-Year IEEE Qualification at 90C



- ← Conductor
- ← Permashield[®]
- ← **Kerite[®]** EPR Insulation
- ← Semicon Insulation Shield
- ← Metallic Shield
- ← CSPE Jacket



SPECIALTY CABLE SOLUTIONS

Firewall SR: 125°C Silicone Rubber Cables

Firewall Coax: LOCA Qualified Coaxial Cables

Firezone 3HR: Circuit Integrity Cables

FireZone® 3 HR

- **Easy Install**
- **Flexible**
- **Moisture Resistant**
- **No Special Tools Needed**

The Simple Solution To NFPA 805!



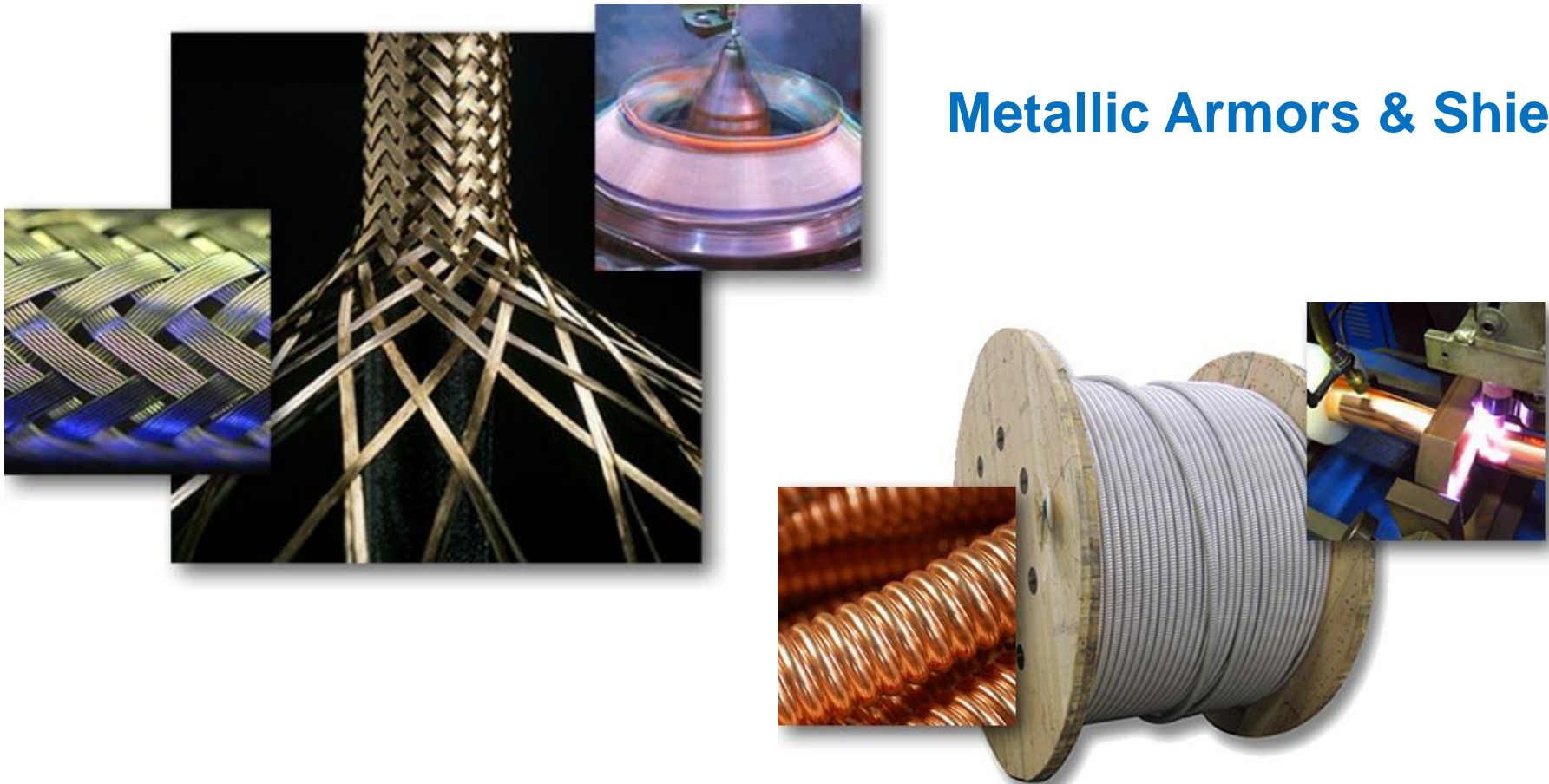
Reactor Head Cables





RSCC NUCLEAR PROCESS CAPABILITIES

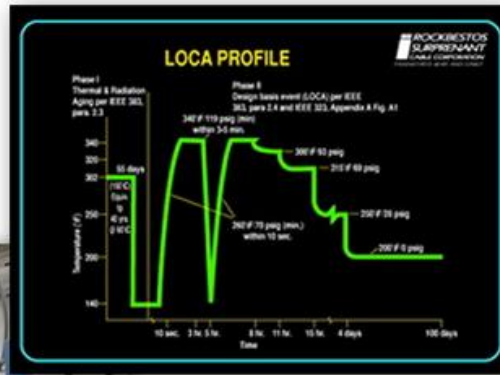
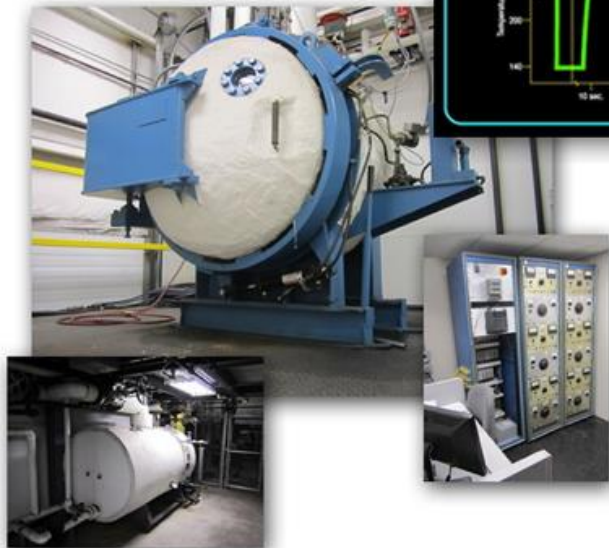
Metallic Armors & Shields



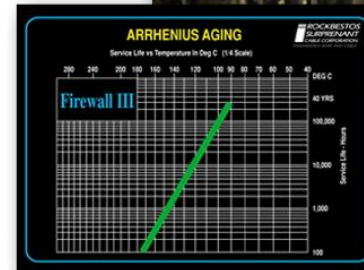


RSCC NUCLEAR QUALIFICATION

IN HOUSE LOCA CHAMBER



LONG TERM AGING



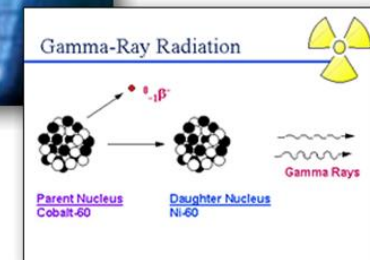
Thermal Life Projections (Arrhenius Test Ovens)



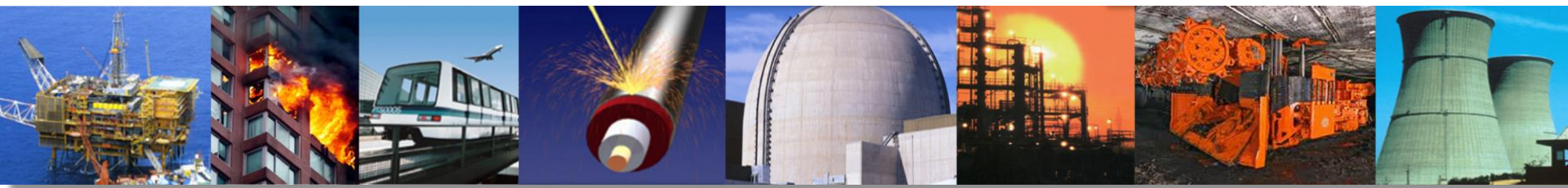
Gamma Radiation Exposure

(Outside Facility)

RADIATION EXPOSURE



DBE & Normal Levels



LESSONS LEARNED - KOREA

RSSC initially supplied all Korean reactors

- Yeonggwang Units 1-4 (1988, 1994, 2011)
- Shin-Kori Units 1 & 2 (2007-2010)
- Shin-Wolsong Units 1 & 2 (2007-2010)
- Ulchin Units 1-6 (1996, 2003)
- Kori Units 1 & 2 (1976)

Preferred Korean suppliers were eventually qualified

- NSSC (May 2013): “Cable qualifications were faked”
- Shutdown 6 reactors until cables can be replaced
- Cost approaching \$4 Billion USD (4 Trillion Yen)

RSCC selected to replace Shin Kori 3&4 safety cables (Nov ‘13)

- UAE selected RSCC before falsifications were unveiled
- RSCC is currently supplying cables on an urgent basis
- “Cable is Cheap, Trouble is Expensive”



مؤسسة الإمارات للطاقة النووية
Emirates Nuclear Energy Corporation



**Proven Nuclear Cable Solutions
Around The World**

**Thank
You!**



Specialty Wire & Cable Group
A Berkshire Hathaway Company

